

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A spatio-temporal filter unit comprising a sigma filter for reducing noise in images, characterized in that the sigma filter comprises one filter kernel for operating on pixels from both a current image and from an output of the spatio-temporal filter unit, said output supplying a temporally recursive filtered image.
- 5 2. (Currently Amended) ~~The spatio-temporal filter unit as claimed in Claim 1A~~ A spatio-temporal filter unit comprising a sigma filter for reducing noise in images, characterized in that the sigma filter comprises one filter kernel for operating on pixels  
5 from both a current image and from an output of the spatio-temporal filter unit, said output supplying a temporally recursive filtered image, characterized in that said spatio-temporal filter unit further comprises:
  - a spatial pixel buffer for storing pixels of the current  
10 image as supplied to the spatio-temporal filter unit;
  - a spatial pixel selector for selecting pixels from the spatial pixel buffer;
  - a temporal pixel buffer for buffering pixels from the output of the spatio-temporal filter unit; and

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15 a temporal pixel selector for selecting pixels from the  
temporal pixel buffer,  
wherein the sigma filter is coupled to an output of said spatial  
pixel selector and to an output of said temporal pixel selection,  
said one filter kernel operating on the pixels from both the  
20 spatial pixel selector and the temporal pixel selector.

3. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 2, characterized in that the sigma filter  
comprises an adaptive sigma filter.

4. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 3, characterized in that an aperture of at least  
one of the temporal pixel selector and the spatial pixel selector  
is adjustable.

5. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 4, characterized in that at least one of the  
temporal pixel selector and the spatial pixel selector is designed  
such that a distance between the selected pixels is adjustable.

6. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 4, characterized in that said spatio-temporal  
filter unit further comprises a motion detector for detecting

motion, said motion detector controlling the aperture of the  
5 temporal pixel selector based on the detected motion.

7. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 4, characterized in that said spatio-temporal  
filter unit further comprises a motion estimator for supplying  
motion vectors, said motion estimator controlling a position of the  
5 temporal pixel selector relative to the temporal pixel buffer based  
on the motion vectors.

8. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 4, characterized in that said spatio-temporal  
filter unit further comprises a noise estimator for estimating a  
noise level in the current image, said noise estimator controlling  
5 the aperture of at least one of the temporal pixel selector and the  
spatial pixel selector based on the estimated noise level.

9. (Previously Presented) The spatio-temporal filter unit as  
claimed in Claim 4, characterized in that said spatio-temporal  
filter unit further comprises a noise estimator for estimating a  
noise level in the current image, said noise estimator controlling  
5 thresholds of the adaptive sigma filter based on the estimated  
noise level.

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10. (Previously Presented) An image display apparatus comprising:  
receiving means for receiving a signal representing  
images;

a display device for displaying the images; and

5 a spatio-temporal filter unit comprising a sigma filter  
for reducing noise in the images, characterized in the sigma filter  
comprises one filter kernel operating on pixels from both a current  
image and from an output of the spatio-temporal filter unit, said  
output supplying a temporally recursive filtered image.

11. (Previously Presented) An image display apparatus comprising:  
receiving means for receiving a signal representing  
images;

a display device for displaying the images; and

5 a spatio-temporal filter unit comprising a sigma filter  
for reducing in the images, characterized in that said spatio-  
temporal filter unit further comprises:

a spatial pixel buffer for storing pixels of a current  
image as supplied to the spatio-temporal filter unit;

10 a spatial pixel selector for selecting pixels from the  
spatial pixel buffer;

a temporal pixel buffer for buffering pixels from the  
output of the spatio-temporal filter unit, said output supplying a  
temporally recursive filtered image; and

15 a temporal pixel selector for selecting pixels from the  
temporal pixel buffer,  
wherein the sigma filter is an adaptive sigma filter and is coupled  
to an output of said spatial pixel selector and an output of said  
temporal pixel selector, said sigma filter comprising one filter  
20 kernel for operating on the pixels from both the spatial pixel  
selector and the temporal pixel selector.

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